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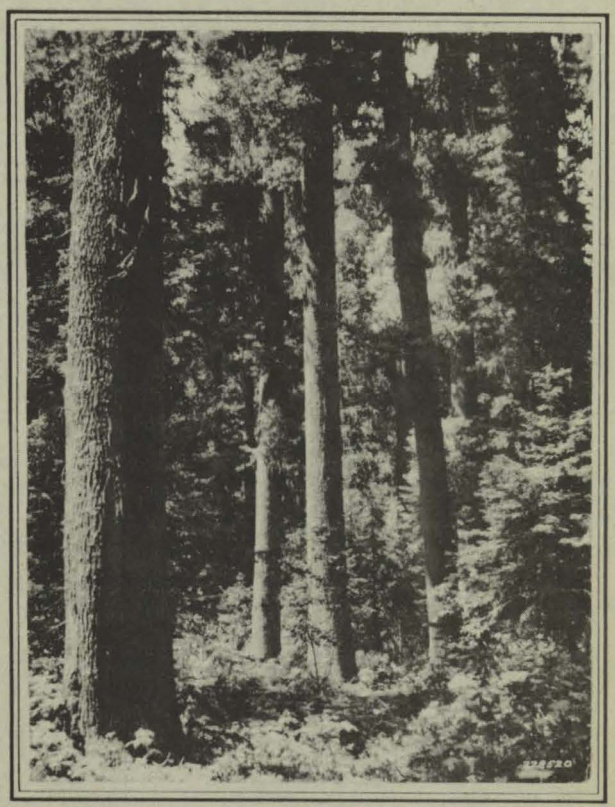
FOREST SURVEY RELEASE NO. 14 A JUNE 1938 PROGRESS REPORT

FOREST STATISTICS
CLEARWATER COUNTY, IDAHO

FROM THE INVENTORY PHASE OF THE FOREST SURVEY



U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

STEPHEN N. WYCKOFF DIRECTOR
MISSOULA MONTANA

BY FOREST SURVEY STAFF M. BRADNER REGIONAL DIRECTOR

FOREST STATISTICS FOR CLEARWATER COUNTY, IDAHO

From the Inventory Phase of the Forest Survey

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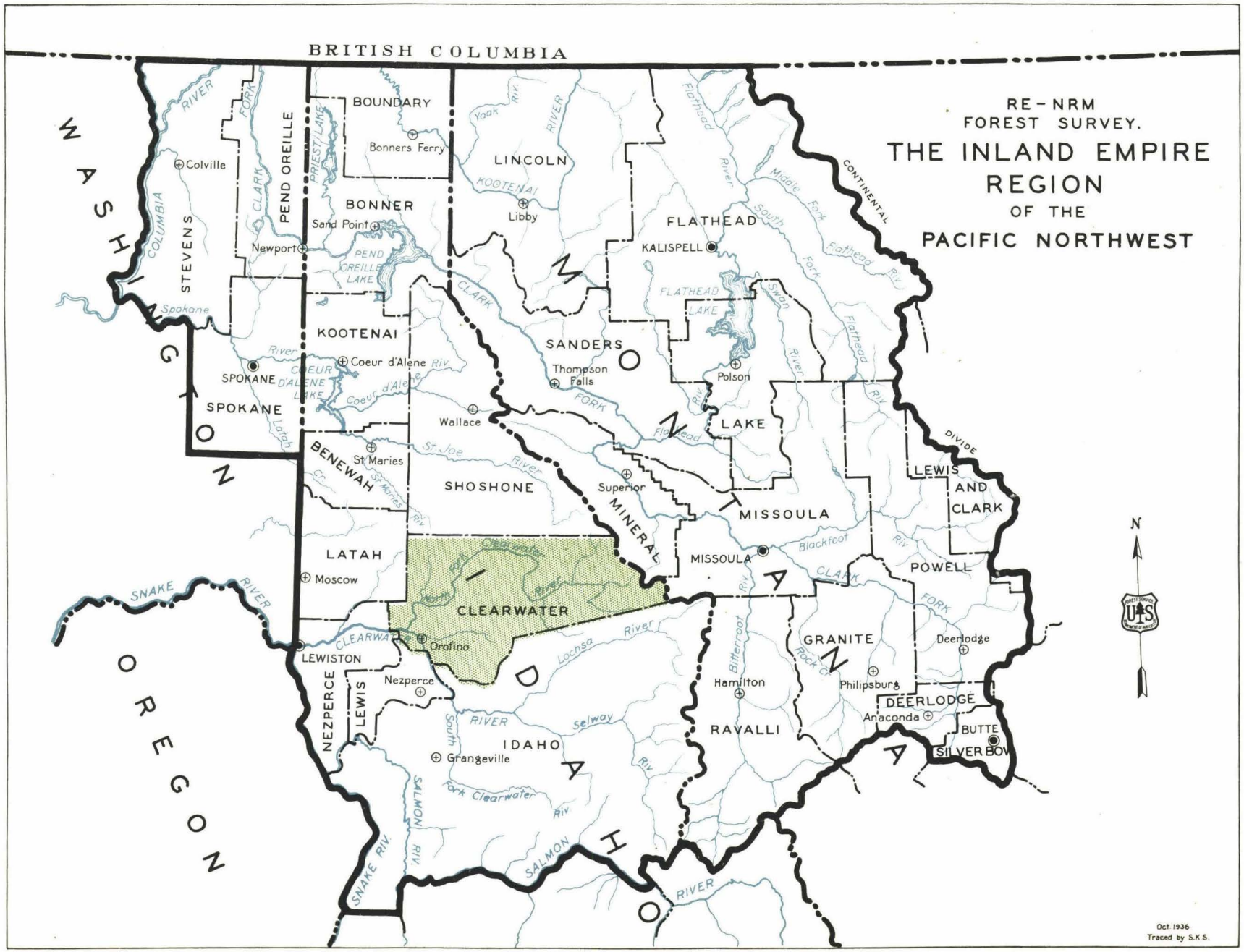
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STEVENS
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KOOTENAI
Coeur d'Alene
SPOKANE
SPOKANE
FLATHEAD
KALISPELL
SANDERS
Thompson Falls
Polson
LAKE
Wallace
BENEWAH
St Maries
SHOSHONE
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MISSOULA
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Philipsburg
Deerlodge
DEERLODGE
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RAVALLI
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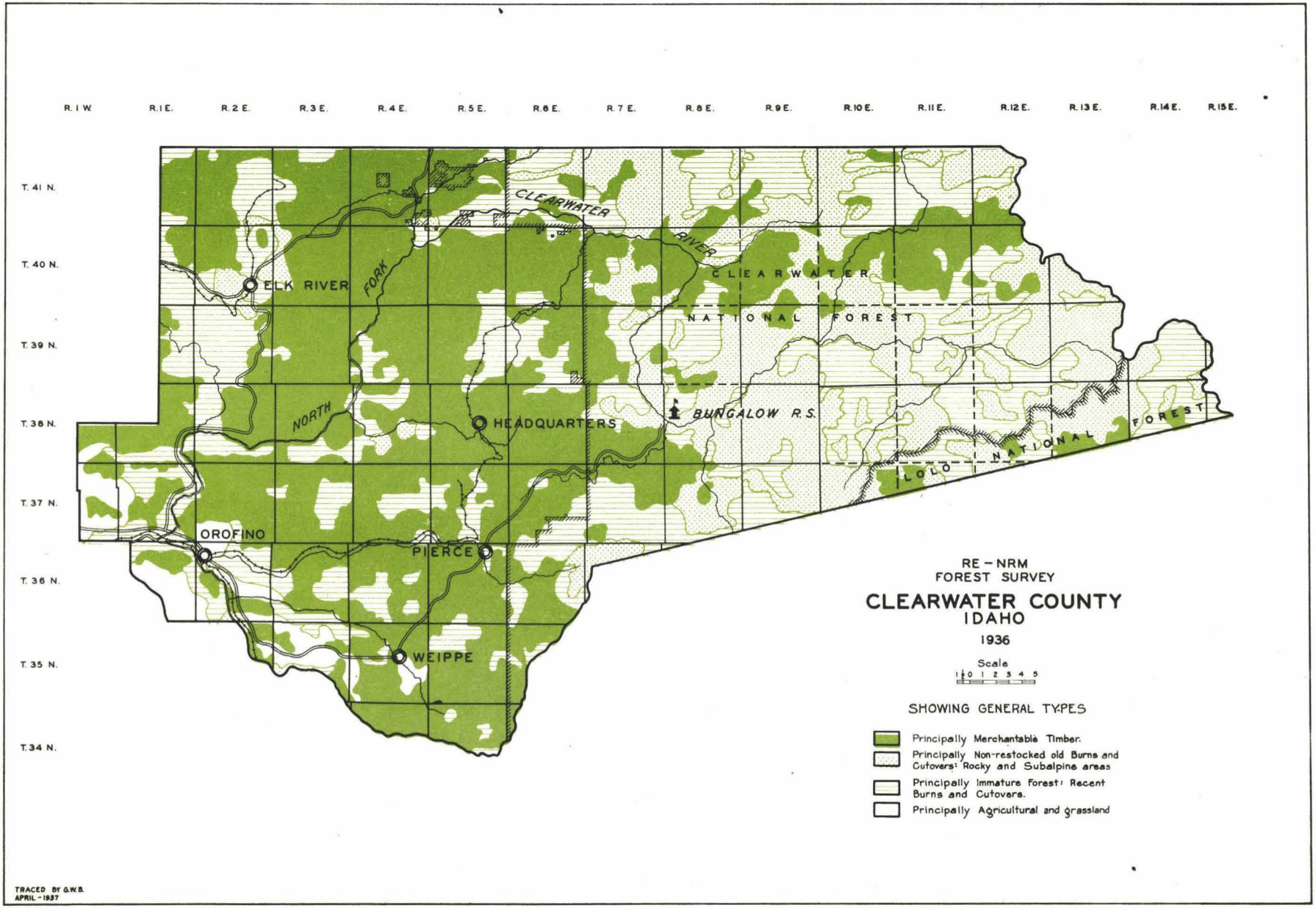
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HEADQUARTERS
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WEIPPE
RE – NRM
FOREST SURVEY
CLEARWATER COUNTY
IDAHO
1936
Scale
1/2 0 1 2 3 4 5
SHOWING GENERAL TYPES
Principally Merchantable Timber.
Principally Non-restocked old Burns and Cutovers: Rocky and Subalpine areas
Principally Immature Forest: Recent Burns and Cutovers.
Principally Agricultural and grassland
TRACED BY G.W.B.
APRIL - 1937

RE-NRM
Forest Survey

FOREST STATISTICS FOR CLEARWATER COUNTY, IDAHO

Foreword

Almost four decades have elapsed since the northern Idaho lumber industry blossomed into a large scale enterprise. In 38 transforming years the virgin timber resource, so generally abundant at the beginning of the century, has steadily been eaten away by a legion of mills. Today the single extensive body of white pine timber in Idaho lies along the tributaries of the Clearwater River. Nearly one-third of all the sawtimber and, more important yet, half of the accessible white pine sawtimber in the Idaho Panhandle may be found in Clearwater County, which contains only one-seventh of the total forest land.

The forests of Clearwater County are the very keystone of the present lumber industry in northern Idaho. As the principal source of white pine timber in this part of the state for years to come, the manner in which these stands are managed and the factors affecting their management are points of major social significance.

This is the twelfth in a series of county reports by the Forest Survey, presenting the inventory statistics concerning the forests of the Northern Rocky Mountain Region. This Region includes the three northeastern counties in Washington, Idaho north of the Salmon River, and Montana.

History of Forest Exploitation

Although it was the last of the white pine areas to be opened up in Idaho and the slowest to be developed, Clearwater County was the site of the first commercial lumber production north of the Salmon River. This initial activity was in connection with the placer mining of gold. In 1860 a party lead by Captain E. D. Pierce made the first important gold discovery in Idaho, along Canal Gulch, a tributary of Orofino Creek and the Clearwater River. Only an occasional white person was to be found in the great north Idaho country prior to this time. By July, however, in this discovery year, it is said that there were 2,000 men in the Orofino basin panning for the yellow metal.

The towns of Pierce and old Oro Fino (near Pierce) were established very soon after the influx began, and by 1861 two small sawmills were being constructed in this vicinity to supply the lumber needed in the mining operations. These plants were undoubtedly the first commercial lumber mills in the Idaho Panhandle. A sawmill had been operated in 1840 near the mouth of the Clearwater River, but this was not a commercial establishment.

How many other sawmills, if any, operated in this locality, as mining boomed and ebbed, is not known. Record is had of a mill built farther north on the north fork of the Clearwater River in 1873. Constructed a few miles above

Ahsahka by L. R. Chapman, this mill was apparently built with the sole idea of supplying lumber to Lewiston. There were several other mills operating in Clearwater County before 1900, but these were very small. So for the first forty years, the vast forest resource in this area remained practically in its original virgin state.

During the first decade of the twentieth century a few small plants were producing lumber for local needs. The period of large scale timber exploitation in the northern part of Clearwater County began in 1911 when the Elk River mill of the Potlatch Lumber Company went into production. Besides being the first of the major mills in this county, the Elk River establishment has been the largest producer to date, with an average yearly output of 38 million board feet per year during its active life. Operations were terminated here in 1930 when the plant was shut down for the last time, later being dismantled.

Extensive exploitation in the great area south of the North Fork of the Clearwater River began considerably later, although a medium-size sawmill was in operation at Fraser (near Weippe) as early as 1910. From 1916 until 1922 six other sawmills with capacities of over 5 million board feet yearly were constructed in this area as well as many smaller plants. During the past several years there has been renewed expansion as the lumber production here has greatly increased.

The following tabulation presents the Clearwater County lumber cut figures for representative years since 1915. The "other mills" in this table have principally been located south of the North Fork of the Clearwater River. Although several of these plants have fairly large capacities none has produced a large volume of lumber in any one year, because of seasonal limitations, etc.:

Lumber Production Clearwater County Mills
Million Board Feet Lumber Tally

Year	Elk River Mill	Other mills	Total
1915	45	13	58
1920	44	6	50
1925	48	25	73
1930	42	28	70
1936	--	56	56

In recent years the timber sawed in the local mills has been greatly exceeded in volume by that exported to lumber manufacturing centers outside the county. A small volume of logs has been transported to Coeur d'Alene and Spokane and a larger amount to Potlatch for manufacture, but by far the greatest percentage has been sawed in the Clearwater mill of the Potlatch Forests Incorporated, at Lewiston, Idaho. In 1936, 60 percent of the sawlog volume produced in Clearwater County was consigned to this mill. The following tabulation indicates the destination of the Clearwater County log production. This includes only the logs sawed into lumber.

A relatively small additional volume (380,000 board feet log scale) was shipped to the mill of the Inland Empire Paper Company at Spokane, Washington:

Destinations of Clearwater County Logs 1936

County	Million bd. ft. lumber tally	Percent
Clearwater County	56	25
Nez Perce County	134	60
Kootenai County	12	5
Latah County	22	10
Total	224	100

Log production figures show that from 79 million board feet lumber tally in 1925 the cut jumped to 105 million board feet in 1927 which was the first year the Lewiston mill operated. Climbing steadily during the next several years a peak of 252 million board feet was reached in 1929. Following a depression low of 52 million board feet in 1932, the log output steadily increased to 224 million board feet in 1936, the latest year for which records are available.

River Transportation of Forest Products

The exploitation of the white pine forests would have been greatly retarded without the transportation facilities afforded by the rivers and streams of northern Idaho. The Clearwater River is in two ways outstanding in this respect. It was the first of the northern Idaho waterways to be extensively used for transporting timber products and it is now

the scene of the greatest of the present day log drives.

Logs were brought down the river early in the sixties for the construction of the log buildings at the newly established community of Lewiston[1/]. The previously mentioned Chapman mill, located above Ahsahka, transported lumber down to Lewiston by raft. Several early Lewiston mills, operating between 1880 and 1897, received logs from the Clearwater forests both in drives and rafts. In addition to this traffic, a large volume of logs, poles, posts, fuelwood and railroad ties was transported to various destinations downstream. Much of this material came to Lewiston, the balance going on to points along the Snake River in Washington and Oregon. Some was driven down the river but most of the material traveled by raft. The practice of rafting began in 1862, reaching a peak in the 1880's when 70 or 80 rafts annually went to Lewiston and beyond. Occasional rafts were sent down the river as late as 1926. It is said that rafts of cedar products went as far as Umatilla, Oregon, and that the first 23 miles of the Northern Pacific Railway out of Pasco, Washington, were laid on ties rafted from the headwaters of the Clearwater.

Although logs were seldom driven below Lewiston, the first successful drive on the Clearwater River went more than 70 miles farther to Riparia, Washington, then known

1/ Information concerning the early river traffic and the mills supplying Lewiston with lumber was obtained from C. T. Stranahan of Lewiston, Idaho.

as Texas Ferry. This drive, by a Captain Smith and including 1½ million feet of logs, was made in 1880. The lumber was sawed there and used in the construction of the O.R. & N. Railway to Spokane.

Present Industrial Development of the County

From an activity engaging several thousand in the early sixties, mining has since declined in the area now included in Clearwater County. In 1930, according to the census, only 29 persons were principally occupied in this enterprise, the county having experienced an industrial regrowth in which lumbering and agriculture have become the mainstays, replacing mining[2/]. In the past several decades there has been a steady increase in population as these two industries, particularly lumbering, have expanded. No figures are available for 1910, as Clearwater County was not formed out of Nez Perce County until the next year. The census of 1920 shows a population of 4,993 persons at that time. There was a 32 percent increase to 6,599 persons between then and the 1930 census.

Of the two major industries lumbering has been by far the more important locally. In 1930, following the largest lumber year to date in this county, the census indicated that a total of 1,207 local residents were principally

2/ In the past few years there has been a revival of mineral activity in Clearwater County, the result of the depression and improved gold prices.

engaged in forest industry. The term forest industry includes lumbering and forest improvement, protection and administration work. In addition to these local inhabitants, there were a number of transient workers given seasonal logging employment. It is estimated that the Clearwater County log and lumber production of 1929 furnished employment sufficient to keep about 1,700 workers engaged on a yearly basis. This latter figure does not include those employed in the several mentioned outside mills sawing Clearwater logs.

Agriculture has been mainly concentrated in the relatively small area in the southwest corner of the county, which is more or less suitable for this type of development. At the present time there are 38,683 acres classified as cultivated (figure 1), 4,499 acres as stumpland pasture, and 17,320 as natural grassland.

Farm expansion has followed no even, upward trend. In 1920 there were 521 farms operated in this county. Five years later the 1925 census recorded but 438 farm units. This was followed by an increase to 493 in 1930 and 570 in 1935. The marked increase in the last five-year period was largely due to the westward movement of drought region farmers. The 1930 census reported a total of 598 persons whose principal occupation was farming.

The relative importance of forestry and agriculture to the community is perhaps best reflected by the proportion of the total population which receives direct and indirect

GENERAL CLASSIFICATION OF LAND
CLEARWATER COUNTY, IDAHO

Figure 1.

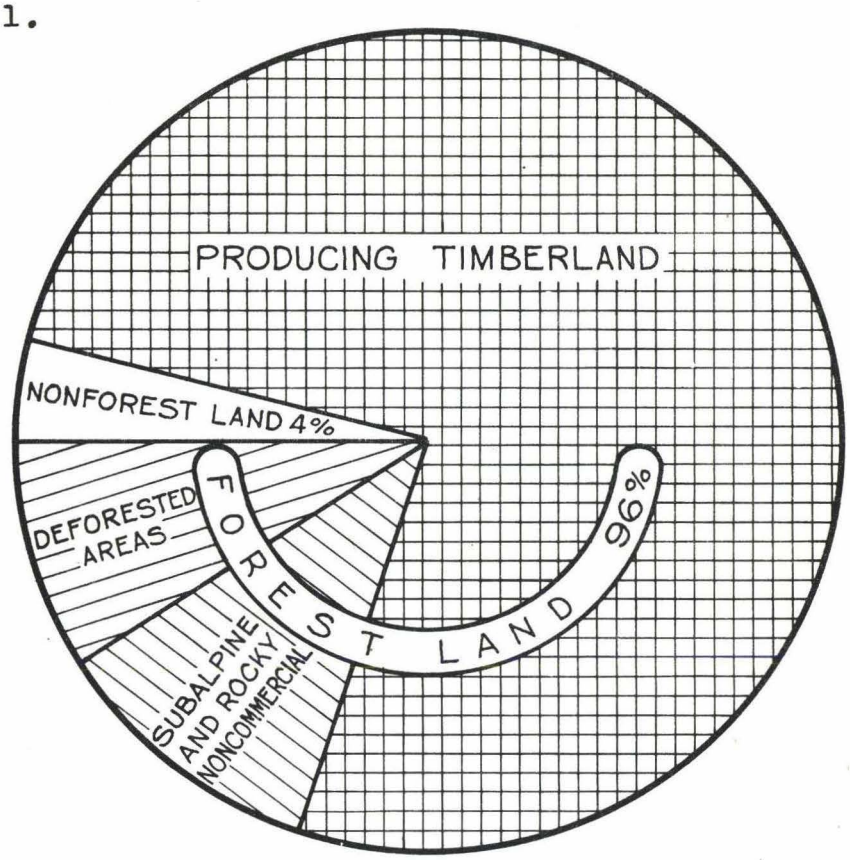


Table 1.

NONFOREST LAND	Area in Acres
Townsites	1,060
Cultivated and Stump Pasture	43,182
Grassland	17,320
Brush	1,012
Barren	4,043
Total	66,617
FOREST LAND	
Timberland	
Producing	1,198,847
Deforested	141,349
Total	1,340,196
Subalpine	147,990
Rocky Noncommercial	26,788
Total	174,778
Total Forest Land	1,514,974
GROSS LAND AREA	1,581,591

support from each. This is based upon the premise that these primary industries indirectly are the support of trade enterprise and other industrial and professional groups of a secondary nature. Using 1930 industrial statistics as a guide, it is estimated that during the previous year about 66 percent of the 6,599 residents were directly and indirectly dependent upon forest industry and that 30 percent were dependent upon agriculture.

The rise of these two industries has stimulated the growth of new communities. Pierce, the center of the early mining operations, has been replaced in importance by Orofino, the county seat, and by Elk River. The 1930 populations in these two towns were 1,078 and 862 respectively. Following the 1930 shutdown and later abandonment of the Elk River mill, this community has shrunk considerably. On the other hand, Orofino, which doubled in size between 1920 and 1930, has grown since the last census.

Although the Clearwater River, as already mentioned, has been an important agent for transporting the various timber products, the bulk of the traffic has been handled by the two railroads tapping the timber stands of this county. A branch line of the Chicago Milwaukee St. Paul and Pacific Railroad connects Elk River with St. Maries and Potlatch[3/]. The Camas Prairie Railroad follows the Clearwater River from

3/ Via the Washington Idaho Montana Railroad from Bovill to Potlatch.

Lewiston with a branch extending from Orofino to above Headquarters (see map).

Forest Stands

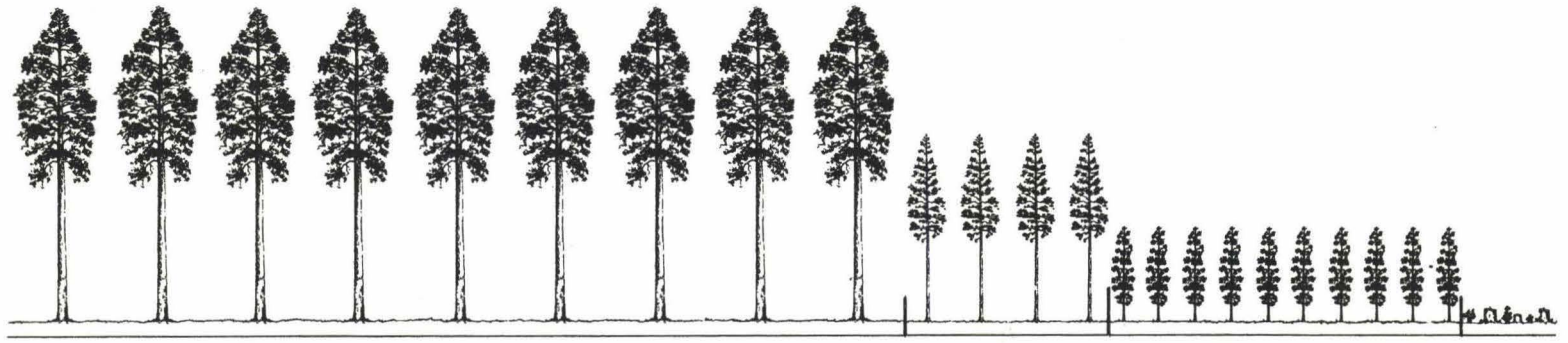
Clearwater County includes a total of 1,581,591 acres of which 96 percent (1,514,974 acres) is forest land (figure 1). A considerable acreage is, for various reasons, unsuitable for the commercial production of timber by virtue of relative inaccessibility and inferior stands. Although of little or no importance from this standpoint the forest cover on these areas is most valuable as a means of stream flow retardation and erosion control.

These forest lands, which were once all public domain, have found their way, by different means, principally into three types of ownership. Private individuals, holding companies, and operating concerns have acquired a large area as has the State of Idaho. However, an extensive area has been retained in Federal ownership, principally as "National Forest". Today these three classes of ownership account for 97.8 percent of the forest land in Clearwater County. The basic purposes of acquisition and the controlling factors at the time the lands were being acquired are largely responsible for a decided dissimilarity between national forest lands and the land in the other two classes.

Of the total forest area (1,514,974 acres) 46.1 percent is "National Forest" (Clearwater, Lolo, St. Joe), 36.5

Fig. 2

CHARACTER OF TIMBERLAND COVER IN ZONES ONE AND TWO - CLEARWATER COUNTY, IDAHO
1,140,321 ACRES



SAWLOG STANDS*
677,857 Acres

POLE STANDS**
128,454 Acres

SEEDLING AND SAPLING STANDS***
264,188 Acres

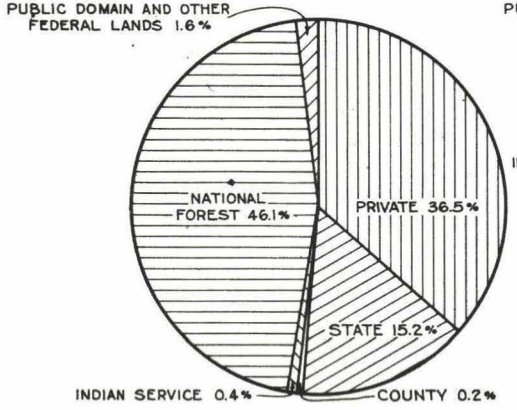
DEFORESTED
69,822 Acres

*Including Merchantable Cedar and Cedar-White Fir Pole Stands. **Including all Immature Cottonwood Stands. ***Including Recent Burns and Cutovers.

Fig. 3

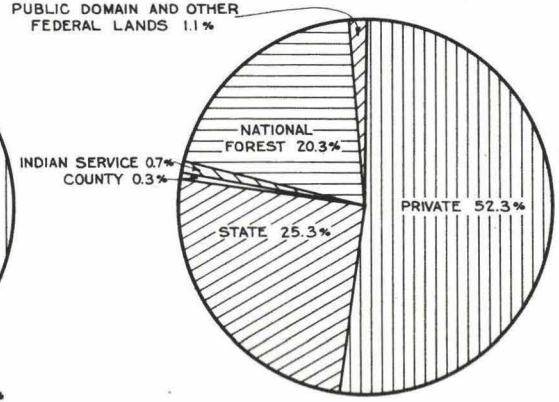
OWNERSHIP OF FOREST LAND AND TIMBER - CLEARWATER COUNTY, IDAHO

ALL FOREST LAND



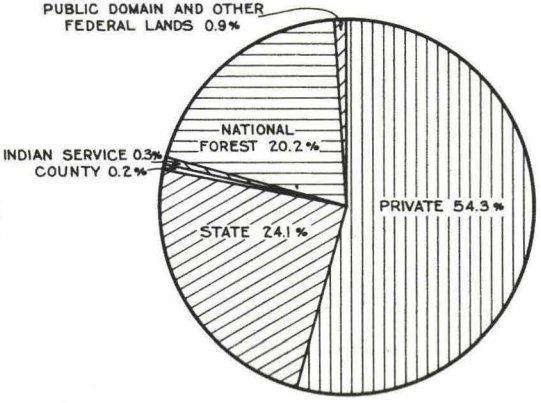
1,514,974 Acres

SAWLOG STANDS - ZONES ONE AND TWO



677,857 Acres

VOLUME IN SAWLOG STANDS - ZONES ONE AND TWO



12,275,090,000 Board Feet

FOR DEFINITION OF ZONES - SEE GLOSSARY.

percent is "private", and 15.2 percent is "state" (figure 3). For the most part the state and private lands lie west of the national forest boundary dividing the county into two nearly equal parts (see map). This western portion consists mainly of a rolling plateau, sharply cut by rivers and streams, in which low and sometimes imperceptible divides are the rule. The elevation along the Clearwater River at Orofino is approximately 1,000 feet above sea level. The plateau averages something over 3,000 feet. The eastern half of the county, which is made up principally of Federal lands in the Clearwater and Lolo National Forests, presents a marked contrast with the western portion. The topography here is, in general, rugged and dominated by mountains ranging from six to eight thousand feet in elevation.

Sawlog Stands - Merchantable sawtimber represents the principal type of forest cover in Clearwater County, occupying 46 percent of the forest area. The sawlog stands, which total 691,297 acres, are largely concentrated in the western half of the county (see county map[4/]). With an average stand of almost 18 thousand board feet per acre over the entire acreage, the total volume in sawlog stands amounts in round

4/ The colored map of Clearwater County in the front of this publication is based upon the forest stands as they were at the beginning of 1936. Logging has wrought the principal changes since then. However, on much of the area subsequently logged only a portion of the timber has been removed, leaving stands that are still classified as sawlog. Thus the general picture is essentially the same at the beginning of 1938.

numbers to 12 billion board feet of which 5 billion feet are white pine (tables 3, 4, and 5). Ninety-eight percent of the sawlog area (677,857 acres) is, in varying degrees, commercially accessible.

Although nearly half of the total forest area in this county lies in the three national forests, only 20.3 percent of the accessible sawlog area is so owned. The fact that private agencies and the State of Idaho own 52.3 percent and 25.3 percent, respectively, of the accessible sawlog area is the most significant feature of the forest ownership. Although about three-fourths of the national forest sawlog area is classified as white pine type against approximately two-thirds for state and private sawlog stands, the national forest stands are, as a whole, of lower value, in that they are less accessible, making the utilization costs higher and the margin of profit lower.

The ownership picture is made somewhat complex by the relatively large number of private owners. This group includes several "large" land owning concerns and many "small" individual owners. Approximately three-fourths of the "private" sawlog area is owned by a dozen or so "large" land holders. The chief difference noted between these two groups is that 79 percent of the "large private" sawlog stand area is white pine type, whereas only 27 percent of the "small private" sawlog area is of this type.

Nonsawlog Timber Stands - Slightly over one-half million acres of timberland contain nonsawlog stands ranging from pole stands that are almost merchantable to recently cut and burned areas. Seventy-seven percent of this area (392,642 acres) has potential commercial value and is classed as follows according to the type of stand:

Zones 1 and 2

Pole stands	128,454 acres
Seedling and sapling stands	181,367 "
Recently burned and logged areas	82,821 "
Total	392,642 acres

Forty-nine percent of the area in these three classes is "National Forest", 34 percent "private" and 13 percent "state".

Deforested Areas - The mark of the many fires which have swept this county is today found in the extensive deforested area in the eastern portion. In the entire county 141,349 acres of timberland are classified as nonrestocked old burns and cutovers (denuded prior to 1925). This does not include the burns on subalpine or rocky areas, but only the deforested land capable of producing commercial timber. The importance of this deforestation which represents 9 percent of the total timberland, is discounted from a lumber production standpoint by the fact that half of said area is economically inaccessible (zone 3). The negative commercial value

of this land does not miminize the adverse effect of the denudation from a watershed protection standpoint, however. The problem of reestablishing an adequate forest cover on this area is principally a federal one, as 85 percent of the acreage is "National Forest". Eleven percent of the deforested area is privately owned while the State of Idaho holds almost four percent.

Noncommercial Areas - The fact that the Clearwater and Lolo National Forests in this county are largely made up of "back country" is reflected in a high proportion of noncommercial area in these forests. In the entire county there are 374,653 acres (one-fourth of forest area) termed as "noncommercial" (including subalpine, rocky noncommercial, and zone 3 timberland, table 2). This area is unsuited for commercial timber production. It is particularly notable that 83 percent is in the national forests. Sixteen percent is private land and less than 1 percent is state owned.

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The outstanding differences which prevail in the composition of these three major classes of ownership are shown in the following tabulation:

Classification of Forest Land in Major Ownership Groups

	Private	State	National Forest
Economically accessible timberland (zones 1 and 2)			
Sawlog stands	64%	75%	20%
Pole stands	11%	8%	6%
Seedling and sapling stands	8%	11%	15%
Recent burns and cutovers	5%	4%	6%
Nonrestocked old burns and cutovers	1%	2%	8%
Economically inaccessible timberland (zone 3)	6%	--	24%
Subalpine and rocky noncommercial areas	5%	--1/	21%
Total	100%	100%	100%

1/ Less than 1 percent.

The obvious inferiority of the national forest holdings for commercial timber production may be attributed to two factors. The private agencies and the State of Idaho were able to acquire the better lands to begin with, and since acquisition, these holdings have been less subject to fire than have the more remote national forest lands.

Recently there has been a movement back to Federal control of certain areas containing younger timber stands. Between 1933 and 1937, inclusive, approximately 58 thousand acres in Clearwater County were donated to the United States Government to be added to the national forests. These were mostly cutover lands with a high potential commercial value.

Outstanding Management Problems

The timber problem in Clearwater County is one of quality rather than quantity. There are 691 thousand acres of sawlog stands containing 12.4 billion feet of sawtimber.

If volume is the criterion, these are the best of the merchantable stands in northern Idaho, averaging almost 18 thousand board feet per acre. Moreover, 99 percent of the total volume (12,275,090,000 board feet[5/]) is economically available, which is a sufficient quantity of timber to maintain cutting at the present rate for 60 or 70 years. This statement is made presupposing the utilization of all species, with a minimum of fire loss. The white pine supply, at the present rate of drain, will be exhausted in a very much shorter period.

The well-known attributes of the white pine have made it the most valuable tree of northern Idaho. In Clearwater County this species represents 42 percent of the volume in the accessible sawlog stands. Lacking profitable markets for the other species associated with white pine, operators have found it unprofitable to log them in amounts proportional to their representation in the sawlog stands. The following tabulation indicates the lack of balance between log drain and sawlog inventory in Clearwater County. (This same general situation prevails to a lesser extent throughout the white pine belt):

5/ The volume estimates of the Forest Survey are in general higher than any previous figures. This is due to the intensiveness of the present survey and to a certain extent to the broader standard of merchantability adhered to in this survey. In the case of some of the secondary species, smaller trees than are actually utilized at the present time are included in these estimates.

Clearwater County

Species	Average annual production of sawlogs° and pulpwood from trees of sawtimber size. Vol. bd. ft. log scale	%	Composition of accessible sawlog stands 1938 (Zones 1 and 2). Vol. bd. ft. log scale	%
White pine	166,312,000	94	5,208,589,000	42
Ponderosa pine	4,627,000	3	542,465,000	5
Other species	5,060,000	3	6,524,036,000	53
Total	175,999,000	100%	12,275,090,000	100%

°1935-1936.

Whether or not this problem is a temporary one remains to be seen. Prior to 1926 the secondary species made up between 60 and 70 percent of the lumber cut. The recent concentration upon white pine cannot be passed off as a temporary fluctuation. It is a definite trend and moreover a problem, the kernel of which lies in the matter of location, as, situated many miles from the great lumber markets, the forests of the Inland Empire are at a distinct disadvantage. White pine alone, because of its high value, can successfully overcome the handicap of distance. There is reason to expect that the values of the secondary species will improve, however, as they have elsewhere--perhaps from the development of new uses or from some other factor.

The timber that is not logged is not wasted. Waiting for the "upturn" are sawlog stands from which white pine has been cut, leaving a merchantable volume of other species. The fact remains, nevertheless, that the white pine sawlog

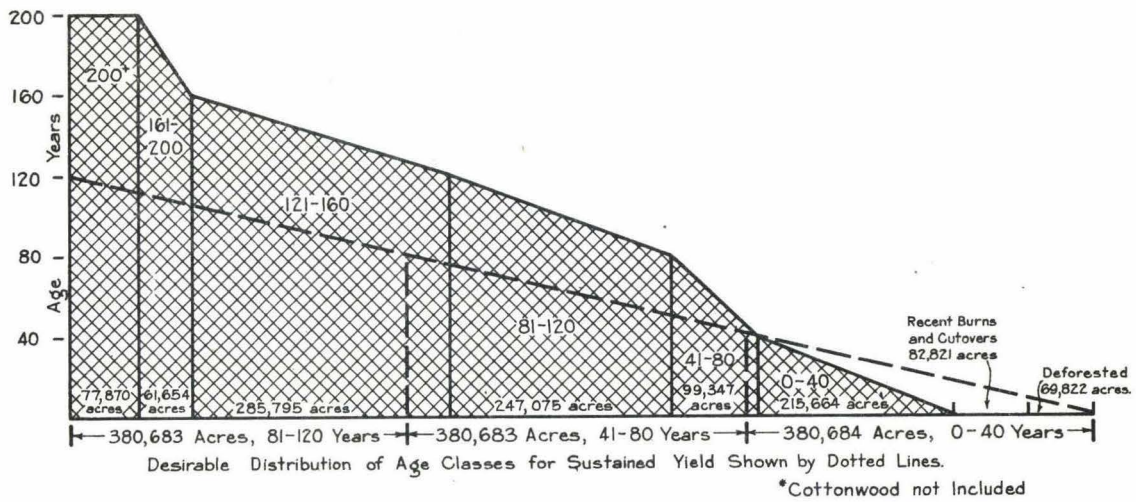
timber now remaining will virtually be exhausted in the next three decades at the present rate of drain.

Since the early days of lumbering the forests of northern Idaho have been known as "fire forests". The position of every timber holder has been made precarious by the ever present possibility of a disasterous loss from fire. While fire will probably always be one of the most important risks as far as individual owners are concerned, the total waste by this destructive agency is being much reduced by the increasingly efficient fire control organizations. Protection of the "back country"has been greatly furthered by the C.C.C. program which has brought what was virtually a roadless wilderness into easy access by the construction of a network of truck trails and forest highways.

A newer enemy has arisen to attack the "breadwinner" of the northern Idaho industry in the form of the insidious blister rust disease of the western white pine. The possibilities of damage may be judged from the situation in other regions. Scheduled, according to pathologists, to eliminate the white pine commercially, unless it is brought under control, this scourge represents another aspect of a complex situation. The chief immediate threat is not to sawtimber trees but to the younger white pines. The infection is now present throughout the county and much work has been done by the Federal Government and other agencies toward control

Fig. 4

ACTUAL AND DESIRABLE DISTRIBUTION OF AGE CLASSES IN TIMBERLANDS ZONES ONE AND TWO — CLEARWATER COUNTY, IDAHO 1,140,048 ACRES*



*Cottonwood not Included

Fig. 5

VOLUME IN TIMBER STANDS BY SPECIES CLEARWATER COUNTY, IDAHO

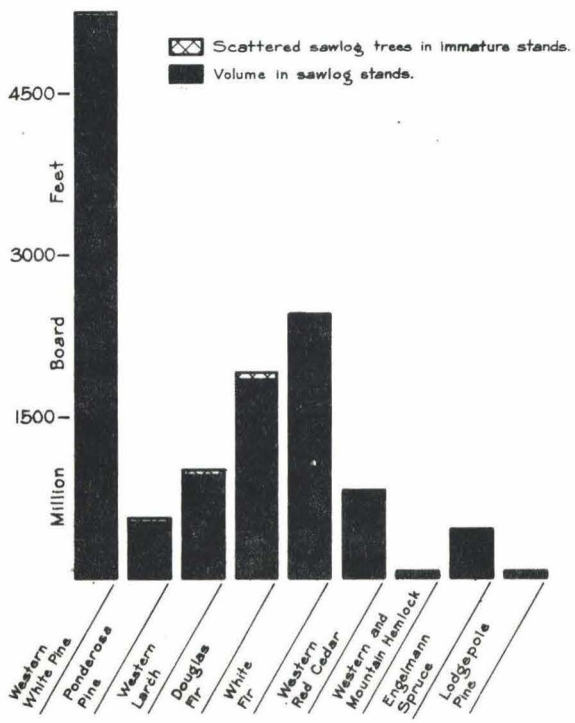
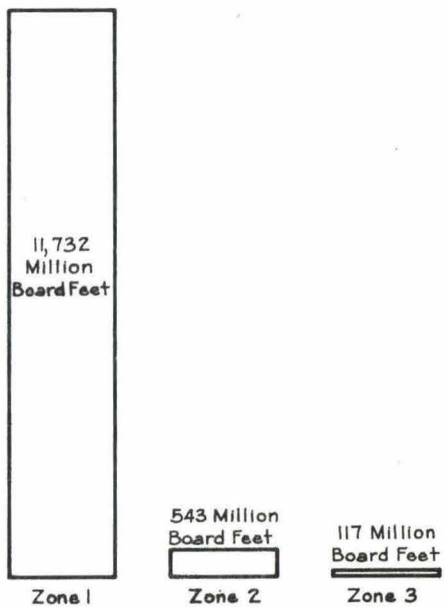


Fig. 6

VOLUME IN SAWLOG STANDS BY ZONES CLEARWATER COUNTY, IDAHO



FOR DEFINITION OF ZONES-SEE GLOSSARY

through eradication of the wild currant and gooseberry bushes which carry the disease.

Forestry can mean merely "keeping the forests green". To the communities, lumbermen and foresters in north Idaho, the term carries the added social implication of keeping the forests producing, the mills running, and men working. The degree to which these desires are realized is largely dependent upon how rapidly the stands are cut and what thought is given to the future at the time of cutting. In Clearwater County nearly all of the logging is on state and private lands, so for the time being the future is in these hands. It is most encouraging to note that today, in the last great white pine area, good forest practice is being inserted into the principal logging operations, through methods of cutting and slash disposal which will insure the growing of future timber crops on these areas.

A question always foremost in the discussion of the exploitation in any region is "are they logging it too rapidly?". Clearwater County is not a unit in itself, making any discussion on a county basis superficial. Yet the indications derived from this preliminary examination are that the white pine cut is much too high whereas the total cut of all species might wisely be increased.

The various applications of sustained yield management are largely modifications of the diagram in figure 4.

The requirements set forth (by the dotted line) in this diagram are: That an equal area be ready for logging each year and that equal areas be in the various stages of growth toward maturity. In Clearwater County there is a desirable surplus over the minimum necessities for a continuous and perpetual production of timber products.

Sustained yield management, as a means of obtaining a constant flow of timber products from the forests, is an important objective. Sustained yield management as the means of realizing stabilized communities, continuously busy workers, and happy, well-fed people, is a vital necessity.

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Designed to meet the many and varied needs for information, a wealth of data is at hand for each county. In this publication, it has been necessary to sacrifice some of the detail to brevity, and consequently the information herein is generalized into the more important classifications. Subsequent reports for the economic unit, of which Clearwater County is a part, will cover the material in more detail, going much farther than this preliminary analysis in making interpretations based on various economic considerations.

To facilitate the most intelligent use of the tables in this publication, the methods followed and the types, terms and classifications used in collecting and presenting

these data are described in a supplementary report.[6/] Brief definitions of the more important of these are contained in the glossary.

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Inventory Phase--Clearwater County, Idaho

P. D. Kemp and G. M. DeJarnette, In Charge

Type Mapping	Check Cruising	Compilation
L. P. Neff	P. N. Pratt	W. L. Royer
H. O. Ficke	G. Rubedew	W. W. Ensign
B. A. Nugent	E. G. Rutquist	A. A. Flint
G. T. Cornell	L. H. DeGroote	R. L. Conn
A. E. Spaulding	J. M. Honeywell	M. O. Moore
J. M. Honeywell	G. N. Allman	M. E. Metcalf
E. G. Rutquist	R. J. Smith	Lee Evans
R. L. Wrights		R. G. Gallup
E. R. Marks		H. B. Hawk
W. F. Gunterman		J. M. Honeywell
J. N. Hessel		O. B. Johnson
R. L. Myers		F. B. Casler
		A. W. Carlson
		B. McLean
		H. J. Pissot
		J. J. McHugh
		R. J. Smith
		F. Hughes

Report writing--S. B. Hutchison

The figures in this report are preliminary and subject to correction in future releases.

6/ Forest Survey Release No. 3. The Inventory Phase of the Forest Survey for the Northern Rocky Mountain Region--A Definition of the Procedure, Terms, and Classifications.

Table 2. CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
CLEARWATER COUNTY, IDAHO

Area in acres

(Continued on next page)

Forest type	Zone	Private					State 1/					County					Indian Service				
		Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total
Western white pine	1	233,404	22,081	23,157	22,588	301,230	108,924	10,344	18,991	8,775	147,034	626	157	262	40	1,085					
	2	1,307	505	8,660		10,472	356	48	106	320	830										
	3	330	79	3,822		4,231															
	Total	235,041	22,665	35,639	22,588	315,933	109,280	10,392	19,097	9,095	147,864	626	157	262	40	1,085					
Ponderosa pine-pure	1	7,080	8,041	1,849	79	17,049	985	243			1,228	80				80	1,529	95			1,624
	Total	7,080	8,041	1,849	79	17,049	985	243			1,228	80				80	1,529	95			1,624
Ponderosa pine-mixed	1	37,009	7,099	3,014	2,786	49,908	20,756	539	306	694	22,295	485		85	43	613	2,904	238	73	70	3,285
	2	202				202	364				364										
	3																				
	Total	37,211	7,099	3,014	2,786	50,110	21,120	539	306	694	22,659	485		85	43	613	2,904	238	73	70	3,285
Ponderosa pine-total	1	44,089	15,140	4,863	2,865	66,957	21,741	782	306	694	23,523	565		85	43	693	4,433	333	73	70	4,909
	2	202				202	364				364										
	3																				
	Total	44,291	15,140	4,863	2,865	67,159	22,105	782	306	694	23,887	565		85	43	693	4,433	333	73	70	4,909
Larch-Douglas fir	1	30,112	14,065	3,952	1,846	49,975	15,208	3,140	3,338	7	21,693	465	569	9		1,043	241				241
	2	2,403	1,325	2,311		6,039	4,513	200	1,556		6,269			40		40					
	3	561				561															
	Total	33,076	15,390	6,263	1,846	56,575	19,721	3,340	4,894	7	27,962	465	569	49		1,083	241				241
Hemlock-white fir	1	9,809				9,809	3,862				3,862	120				120					
	2						40				40										
	3																				
	Total	9,809				9,809	3,902				3,902	120				120					
Douglas fir	1	8,566	2,419	1,755	79	12,819	4,156	555	141		4,852	452	3			455	105	298	561	124	1,088
	2	460	789			1,249	140	94			234										
	3		153			153															
	Total	9,026	3,361	1,755	79	14,221	4,296	649	141		5,086	452	3			456	105	298	561	124	1,088
Engelmann spruce	1	1,349				1,349	160				160										
	2	2,325				2,325															
	3	1,622	1	374		1,997															
	Total	5,296	1	374		5,671	160				160										
Lodgepole pine	1	1,677	1,219	251		3,147	216	80			296		70	39		109					
	2			286		286		13			13										
	3	628	3,748	13,333		17,709															
	Total	2,305	4,967	13,870		21,142	216	93			309		70	39		109					
Western red cedar 3/ 4/	1	2,760				2,760	855		115		970										
	2																				
	Total	2,760				2,760	855		115		970										
Cedar-white fir 3/	1	15,955	890	610		17,455	10,625	1,897	1,478		14,000	166				166	54				54
	2	43				43	180				180										
	Total	15,998	890	610		17,498	10,805	1,897	1,478		14,180	166				166	54				54
Cottonwood 5/	1		217			217															
	Total		217			217															
Total Producing timberland	1	347,721	56,031	34,586	27,378	465,718	165,747	16,798	24,369	9,476	216,390	2,394	799	395	83	3,671	4,833	631	634	194	6,292
	2	6,740	2,619	11,257		20,616	5,593	355	1,662	320	7,930			40		40					
	3	3,141	3,981	17,529		24,651															
	Total	357,602	62,631	63,374	27,378	510,985	171,340	17,153	26,031	9,796	224,320	2,394	799	435	83	3,711	4,833	631	634	194	6,292
Nonrestocked old burns and cutovers	1					4,411					5,294										176
	2					2,806															
	3					8,115															
	Total					15,332					5,294										176
Total timberland	1					470,129					221,684					3,671					6,468
	2					23,422					7,930					40					
	3					32,766															
	Total					526,317					229,614					3,711					6,468
Subalpine rocky noncommercial	1					1,063					111					22					39
	2					22															
	3					25,298					362										
	Total					26,383					473					22					39
GROSS FOREST AREA	1					471,192					221,795					3,693					6,507
	2					23,444					7,930					40					
	3					56,064					362										
	Total					552,700					230,087					3,733					6,507

1/ Available for conversion.
2/ Federal powersite withdrawals.
3/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
4/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
5/ All immature cottonwood stands are grouped in one class.

Data as of January 1, 1938.

RE-NRM
Forest Survey

Table 2. CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
CLEARWATER COUNTY, IDAHO

(Continued from preceding page)

Area in acres

Forest type	Zone	National Forest 1/					Public Domain					Other Federal Lands 2/					Total				
		Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns & cutovers	Total
Western white pine	1	86,865	28,548	62,160	18,648	196,221	3,736	3,037	3,345	101	10,219	55		42		97	433,610	64,167	107,957	50,152	655,886
	2	20,082	4,498	29,253	26,158	79,991	2				2						21,747	5,051	38,019	26,478	91,295
	3	1,674	1,324	22,032	4,327	29,357											2,004	1,403	25,854	4,327	33,588
	Total	108,621	34,370	113,445	49,133	305,569	3,738	3,037	3,345	101	10,221	55		42		97	457,361	70,621	171,830	80,957	780,769
Ponderosa pine-pure	1	165	1			166	400	230	15		645	263	233	3		499	10,502	8,843	1,867	79	21,291
	Total	165	1			166	400	230	15		645	263	233	3		499	10,502	8,843	1,867	79	21,291
Ponderosa pine-mixed	1	1,699	29	13	162	1,903	984	604	7	136	1,731	387	111		12	510	64,224	8,620	3,498	3,903	80,245
	2	399				399	37				37						1,002				1,002
	3	230				230											230				230
	Total	2,328	29	13	162	2,532	1,021	604	7	136	1,768	387	111		12	510	65,456	8,620	3,498	3,903	81,477
Ponderosa pine-total	1	1,864	30	13	162	2,069	1,384	834	22	136	2,376	650	344	3	12	1,009	74,726	17,463	5,365	3,982	101,536
	2	399				399	37				37						1,002				1,002
	3	230				230											230				230
	Total	2,493	30	13	162	2,698	1,421	834	22	136	2,413	650	344	3	12	1,009	75,958	17,463	5,365	3,982	102,768
Larch-Douglas fir	1	5,606	3,326	2,430	9	11,371	911	1,913	425	28	3,277	98	565	417	116	1,196	52,641	23,578	10,571	2,006	88,796
	2	3,428	783	3,621		7,832	55	156	759		970						10,399	2,464	8,287		21,150
	3	1,117	322	2,453		3,892											1,678	322	2,453		4,453
	Total	10,151	4,431	8,504	9	23,095	966	2,069	1,184	28	4,247	98	565	417	116	1,196	64,718	26,364	21,311	2,006	114,399
Hemlock-white fir	1	552	77			629	108				108						14,451	77			14,528
	2		1,587	159		1,746											40	1,587	159		1,786
	3	419	2,825			3,244											419	2,825			3,244
	Total	971	4,489	159		5,619	108				108						14,910	4,489	159		19,558
Douglas fir	1	485	978	89		1,552	138	197			335		479			479	13,902	4,929	2,546	203	21,580
	2	1,903	1,213	1,215		4,331		553			553						2,503	2,649	1,215		6,367
	3	825	222			1,047											825	375			1,200
	Total	3,213	2,413	1,304		6,930	138	750			888		479			479	17,230	7,953	3,761	203	29,147
Engelmann spruce	1	1,385	31			1,416	40				40						2,934	31			2,965
	2	3,758	49	68		3,875											6,083	49	68		6,200
	3	2,340	369	182		2,911											3,962	390	556		4,908
	Total	7,483	469	250		8,202	40				40						12,979	470	624		14,073
Lodgepole pine	1	103		344		447		40			40						1,996	1,409	634		4,039
	2		102	3,441		3,543												115	3,727		3,842
	3	3,694	4,017	55,305		63,016											4,322	7,765	68,638		80,725
	Total	3,797	4,119	59,090		67,006		40			40						6,318	9,289	72,999		88,606
Western red cedar 3/4/	1	4,930		96		5,026	4				4						8,549		211		8,760
	2	79				79											79				79
	Total	5,009		96		5,105	4				4						8,628		211		8,839
Cedar-white fir 3/	1	5,476	458	520		6,454	138	62			200	24	13			37	32,438	3,320	2,608		38,366
	2	534	1,292			1,826											757	1,292			2,049
	Total	6,010	1,750	520		8,280	138	62			200	24	13			37	33,195	4,612	2,608		40,415
Cottonwood 5/	1		56			56												273			273
	Total		56			56												273			273
Total producing timberland	1	107,266	33,504	65,652	18,819	225,241	6,459	6,083	3,792	265	16,599	827	1,401	462	128	2,818	635,247	115,247	129,892	56,343	936,729
	2	30,183	9,524	37,757	26,158	103,622	94	709	759		1,562						42,610	13,207	51,475	26,478	133,770
	3	10,299	9,099	79,972	4,327	103,697											13,440	13,080	97,501	4,327	128,348
	Total	147,748	52,127	183,381	49,304	432,560	6,553	6,792	4,551	265	18,161	827	1,401	462	128	2,818	691,297	141,534	278,868	87,148	1,198,847
Nonrestocked old burns and cutovers	1					18,401					309					89					28,680
	2					38,106					230										41,142
	3					63,412															71,527
	Total					119,919					539					89					141,349
Total timberland	1					243,642					16,908					2,907					965,409
	2					141,728					1,792										174,912
	3					167,105															199,875
	Total					552,479					18,700					2,907					1,340,196
Subalpine rocky noncommercial	1					2,097					449					854					4,635
	2					5,164															5,186
	3					138,772					525										164,957
	Total					146,033					974					854					174,778
GROSS FOREST AREA	1					245,739					17,357					3,761					970,044
	2					146,892					1,792										180,098
	3					305,881					525										364,8...
	Total					698,512					19,674					3,761					1,514,974

1/ Available for conversion.
2/ Federal powersite withdrawals.
3/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
4/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
5/ All immature cottonwood stands are grouped in one class.

Data as of January 1, 1938

RE-NRM
Forest Survey

Table 3. TOTAL VOLUME OF SAWTIMBER BY TYPE OF STAND, SPECIES AND OWNERSHIP
CLEARWATER COUNTY, IDAHO

Ownership class	Volume by species - thousand board feet net log scale (Scribner Decimal C)										Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White fir	Western red cedar	Western & mountain hemlock	Engelmann spruce	Lodgepole pine	Total	Cedar Poles
Sawlog Stands[1] (all zones)											
Private	2,923,744	312,755	529,693	990,516	1,319,230[2]	387,198	12,674	186,372	25,791[4]	6,687,973	1,776,214
State	1,178,599	178,218	233,242	516,120	655,365	158,715	2,580	33,622	6,721	2,963,182	1,145,696
County	4,553	3,349	4,328	9,079	7,135	959			59	29,462	3,454
Indian Service		22,831	236	10,601	223[3]	108				33,999	432
National Forest	1,070,293	15,208	179,468	315,748	428,273[3]	256,079	44,097	229,345	31,305[5]	2,569,816	455,489
Public Domain	40,091	6,524	8,295	16,894	21,921	3,699	693	2,109	54	100,280	26,241
Other Federal Lands[6]	285	3,702	450	1,874	665	158		5		7,139	523
Total	5,217,565	542,587	955,712	1,860,832	2,432,812	806,916	60,044	451,453	63,930	12,391,851	3,408,049
Scattered Sawlog Trees in Immature Stands[7] (all zones)											
Private	12,856	23,212	16,726	28,060	5,954	1,679		3,238	7,227	98,952	2,466
State	4,194	2,809	6,729	7,147	3,670	613		100	649	25,911	12
County	73	299	394	837	16				16	1,635	
Indian Service		1,015		689	14					1,718	
National Forest	7,630	1,121	7,664	8,224	2,296	1,395	1,923	3,648	3,391	37,292	
Public Domain	1,887	2,256	1,271	5,510	859	174		17	17	11,991	
Total	26,640	30,712	32,784	50,467	12,809	3,861	1,923	7,003	11,300	177,499	2,478
Grand Total	5,244,205	573,299	988,496	1,911,299	2,445,621	810,777	61,967	458,456	75,230	12,569,350	3,410,527

1/ Includes the volume in cedar and cedar-white fir pole stands.
2/ Includes 6,406 M board feet alpine fir.
3/ Includes 19,921 M board feet alpine fir.
4/ Includes 637 M board feet white bark pine.
5/ Includes 607 M board feet white bark pine
6/ Federal powersite withdrawals.
7/ Includes 12,372 M feet in recently cut and burned, deforested, grassland, etc. areas.

Data as of January 1, 1938.

RE-NRM
Forest Survey

Table 4. VOLUME OF SAWTIMBER IN SAWLOG STANDS[1] BY ZONE, OWNERSHIP AND SPECIES
CLEARWATER COUNTY, IDAHO

Ownership class	Volume by species - thousand board feet net log scale (Scribner Decimal C.)										Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White fir	Western red cedar	Western & mountain hemlock	Engelmann spruce	Lodgepole pine	Total	Cedar poles
Zone 1											
Private	2,912,270	310,572	512,988	964,003	1,307,515[2]	385,890	11,644	147,605	20,338	6,572,825	1,769,875
State	1,173,357	173,030	222,342	490,624	647,945	156,333	2,580	33,587	6,721	2,906,519	1,117,050
County	4,553	3,349	4,328	9,079	7,135	959			59	29,462	3,454
Indian Service		22,831	236	10,601	223[3]	108				33,999	432
National Forest	931,385	11,171	142,060	239,869	362,366[3]	247,145	10,500	137,740	1,129	2,083,365	440,766
Public Domain	39,974	6,417	8,081	16,491	21,727	3,591	693	2,109	54	99,137	24,966
Other Federal Lands[10]	285	3,702	450	1,874	665	158		5		7,139	523
Total	5,061,824	531,072	890,485	1,732,541	2,347,576	794,184	25,417	321,046	28,301	11,732,446	3,357,066
Zone 2											
Private	10,389	2,150	14,511	23,762	9,236[4]	1,286	31	27,943		89,308	6,339
State	5,242	5,188	10,900	25,496	7,420	2,382		35		56,663	28,646
National Forest	131,017	3,948	29,940	64,978	56,231[5]	8,923	22,074	73,506	4,913	395,530	14,414
Public Domain	117	107	214	403	194	108				1,143	1,275
Total	146,765	11,393	55,565	114,639	73,081	12,699	22,105	101,484	4,913	542,644	50,674
Zone 3											
Private	1,085	33	2,194	2,751	2,479[6]	22	999	10,824	5,453[8]	25,840	
National Forest	7,891	89	7,468	10,901	9,676[7]	11	11,523	18,099	25,263[9]	90,921	309
Total	8,976	122	9,662	13,652	12,155	33	12,522	28,923	30,716	116,761	309
Grand Total	5,217,565	542,587	955,712	1,860,832	2,432,812	806,916	60,044	451,453	63,930	12,391,851	3,408,049

1/ Includes the volume in cedar and cedar-white fir merchantable pole stands.
2/ Includes 766 M board feet alpine fir.
3/ Includes 4,983 M board feet alpine fir.
4/ Includes 3,811 M board feet alpine fir.
5/ Includes 9,741 M board feet alpine fir.
6/ Includes 1,829 M board feet alpine fir.
7/ Includes 5,197 M board feet alpine fir.
8/ Includes 637 M board feet white bark pine.
9/ Includes 607 M board feet white bark pine.
10/ Federal powersite withdrawals

Data as of January 1, 1938.

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Table 5. VOLUME OF SAWTIMBER IN SAWLOG STANDS BY TYPE, ZONE AND SPECIES
CLEARWATER COUNTY, IDAHO

Timber type	Volume by species - thousand board feet net log scale (Scribner Decimal C.)										Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White fir	Western red cedar	Western & mountain hemlock	Engelmann spruce	Lodgepole pine	Total	Cedar poles
Zone 1											
Western white pine	4,963,979	77,740	606,388	1,143,160	1,888,217[1]	529,420	22,043	277,061	1,949	9,509,957	2,997,947
Ponderosa pine-pure	53	64,600		3,385	293					68,331	
Ponderosa pine-mixed	5,285	340,721	65,943	205,471	41,752	1,211		255	6,349	666,987	20,295
Larch-Douglas fir	25,552	24,835	156,248	201,137	88,568	10,994	24	1,657	5,033	514,048	75,586
Hemlock-white fir	4,325	924	9,586	17,745	105,675	3,143	2,894	998		145,290	2,266
Douglas fir	8,991	11,921	4,103	102,231	30,167[2]	820			84	158,317	13,290
Engelmann spruce	6,268	140	4,423	6,637	8,978[2]	685	280	30,090		57,501	
Lodgepole pine	2,020	1,984	1,868	1,840	111			257	13,841	21,921	
Western red cedar[13]	10,782		4,853	5,364	18,712	97,417		4,209		141,337	70,443
Cedar-white fir[13]	54,569	8,207	37,073	45,571	165,103	150,494	176	6,519	1,045	448,757	177,239
Total	5,061,824	531,072	890,485	1,732,541	2,347,576	794,184	25,417	321,046	28,301	11,732,446	3,357,066
Zone 2											
Western white pine	127,870	2,355	14,685	35,869	43,453[3]	5,094	22,092	35,115	4,904	291,437	4,745
Ponderosa pine-mixed	83	4,609	415	3,494	620[4]	146				9,367	2,758
Larch-Douglas fir	8,525	3,825	30,685	45,957	11,403[5]	3,148		3,924	9	107,476	36,031
Hemlock-white fir			40	40	120					200	
Douglas fir	319	244	383	16,766	3,488[6]	209				21,409	865
Engelmann spruce	9,346		8,690	11,266	9,579[7]	1,061	13	62,287		102,242	
Western red cedar[13]						1,422		158		1,580	
Cedar-white fir[13]	622	360	667	1,247	4,418[8]	1,619				8,933	6,275
Total	146,765	11,393	55,565	114,639	73,081	12,699	22,105	101,484	4,913	542,644	50,674
Zone 3											
Western white pine	5,554	122	3,715	3,441	1,990[9]		2,444	4,039	20	21,325	309
Ponderosa pine-mixed	2,070		391	161						2,622	
Larch-Douglas fir	477		2,919	4,451	1,264[10]			657	1,113[13]	10,881	
Hemlock-white fir					84[11]		8,924		84[13]	9,092	
Douglas fir	42			2,966	867[12]			646	299[13]	4,820	
Engelmann spruce	604		2,408	2,175	7,493[13]	33	1,154	23,581	2,947[13]	40,394	
Lodgepole pine	229		229	458	458				26,253	27,627	
Total	8,976	122	9,662	13,652	12,155	33	12,522	28,923	30,716	116,761	309
Grand total	5,217,565	542,587	955,712	1,860,832	2,432,812	806,916	60,044	451,453	63,930	12,391,851	3,408,049

1 Includes 4,987 M. board feet alpine fir.
2 Includes 762 M. board feet alpine fir.
3 Includes 3,858 M. board feet alpine fir.
4 Includes 225 M. board feet alpine fir.
5 Includes 9,397 M. board feet alpine fir.
6 Includes 72 M. board feet alpine fir.
7 Includes 14 M. board feet alpine fir.
8 Includes 84 M. board feet alpine fir
9 Includes 622 M. board feet alpine fir.
10 Includes 6,306 M. board feet alpine fir.
11 Includes 84 M. board feet white bark pine.
12 Includes 1,160 M. board feet white bark pine.
13 Includes the volume in merchantable pole stands.

Data as of January 1, 1938.

Table 6. CLASSIFICATION OF NONSAWLOG IMMATURE TIMBER TYPES ACCORDING TO DENSITY OF STOCKING

CLEARWATER COUNTY, IDAHO

Timber type [1]	Pole							
	Well stocked:		Medium stocked		Poorly stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	59,583	84	9,628	14	1,410	2	70,621	100
Ponderosa pine-pure	7,551	85	317	4	975	11	8,843	100
Ponderosa pine-mixed	6,220	72	2,400	28			8,620	100
Larch-Douglas fir	23,077	88	2,916	11	371	1	26,364	100
Hemlock-white fir	4,323	96			166	4	4,489	100
Douglas fir	7,386	93	503	6	64	1	7,953	100
Engelmann spruce	80	17	390	83			470	100
Lodgepole pine	9,224	99	65	1			9,289	100
Western red cedar [2]								
Cedar-white fir	4,402	95			210	5	4,612	100
Total	121,846	86	16,219	12	3,196	2	141,261	100

Timber type [1]	Seedling and sapling							
	Well stocked		Medium stocked		Poorly stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	53,951	32	56,984	33	60,895	35	171,830	100
Ponderosa pine-pure	620	33	367	20	880	47	1,867	100
Ponderosa pine-mixed	1,327	38	1,311	37	860	25	3,498	100
Larch-Douglas fir	7,422	35	9,250	43	4,639	22	21,311	100
Hemlock-white fir			159	100			159	100
Douglas fir	2,836	75	507	14	418	11	3,761	100
Engelmann spruce			68	11	556	89	624	100
Lodgepole pine	31,317	43	24,353	33	17,329	24	72,999	100
Western red cedar [2]	211	100					211	100
Cedar-white fir	1,281	49	638	25	689	26	2,608	100
Total	98,965	35	93,637	34	86,266	31	278,868	100

Timber type [1]	Total pole, seedling and sapling							
	Well stocked		Medium stocked		Poorly stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	113,534	47	66,612	27	62,305	26	242,451	100
Ponderosa pine-pure	8,171	76	684	7	1,855	17	10,710	100
Ponderosa pine-mixed	7,547	62	3,711	31	860	7	12,118	100
Larch-Douglas fir	30,499	64	12,166	25	5,010	11	47,675	100
Hemlock-white fir	4,323	93	159	3	166	4	4,648	100
Douglas fir	10,222	87	1,010	9	482	4	11,714	100
Engelmann spruce	80	7	458	42	556	51	1,094	100
Lodgepole pine	40,541	49	24,418	30	17,329	21	82,288	100
Western red cedar	211	100					211	100
Cedar-white fir	5,683	79	638	9	899	12	7,220	100
Total	220,811	53	109,856	26	89,462	21	420,129	100

1/ The cottonwood type is not classified as to stocking.
2/ Small poles (6 to 12 or 14 inches) included with seedling and sapling.

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Table 7. CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND SITE QUALITY
CLEARWATER COUNTY, IDAHO

Area in acres

Timber type 1/	Site number					Total area	Average site
	I	II	III	IV	V		
Western white pine	218,083	367,910	100,029	13,790		699,812	II
Ponderosa pine		1,125	14,531	5,518	38	21,212	III
Ponderosa pine-mixed	208	1,957	58,680	16,729		77,574	III
Larch-Douglas fir	612	2,729	32,282	57,916	18,854	112,393	IV
Hemlock-white fir	5,109	771	7,333	6,345		19,558	III
Douglas fir	561	716	1,405	21,611	4,651	28,944	IV
Engelmann spruce		231	8,882	4,960		14,073	III & IV
Lodgepole pine	5,602	7,703	67,350	7,951		88,606	III
Western red cedar	44	4,667	2,217	1,911		8,839	II & III
Cedar-white fir	596	24,777	14,889	153		40,415	II & III
Total	230,815	412,586	307,598	136,884	23,543	1,111,426	

1/ The cottonwood type is not classified as to site.

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Table 8. CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND AGE CLASS
ZONES ONE AND TWO
CLEARWATER COUNTY, IDAHO

Area in acres

Timber type 1/	Age class - years						Total
	0-40	41-80	81-120	121-160	161-200	200+	
Western white pine	167,473	55,650	186,943	183,661	34,427	42,397	670,551
Ponderosa pine-pure	3,774	7,295	4,677	3,942	1,209	315	21,212
Ponderosa pine-mixed	7,993	3,480	18,928	23,579	8,628	14,736	77,344
Larch-Douglas fir	23,695	19,106	18,380	40,863	3,577	2,319	107,940
Hemlock-white fir	159	1,664	2,939	6,697	1,185	3,670	16,314
Douglas fir	5,154	5,147	9,492	6,905	847	199	27,744
Engelmann spruce	68	49	857	1,548	6,491	152	9,165
Lodgepole pine	4,476	1,973	1,162	270			7,881
Western red cedar	96	115	218	2,056	1,075	5,279	8,839
Cedar-white fir	2,776	4,868	3,479	16,274	4,215	8,803	40,415
Total	215,664	99,347	247,075	285,795	61,654	77,870	987,405

1/ The cottonwood type is not classified as to age. Data as of January 1, 1938

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Table 9. AVERAGE ANNUAL CUTTING DEPLETION FROM THE GREEN TIMBER RESOURCES BY TREE SIZE, SPECIES AND PRODUCTS CLEARWATER COUNTY, IDAHO

Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Hemlock	Engelmann spruce	Lodgepole pine	Total
From trees of sawtimber size (thousand board feet, Scribner Decimal C, log scale)										
Sawlogs	94,626	7,540	3,548	4,865	9,185	810	20	583	5	121,182
Fuelwood		3,173	36	3,940						7,149
Fence posts						431				431
Pulpwood					693			26		719
Shingles						5				5
Hewed ties			76	113						189
Total	94,626	10,713	3,660	8,918	9,878	1,246	20	609	5	129,675
From trees of less than sawtimber size (cubic feet)										
Fuelwood		28,724	1,548	169,420						199,692
Fence posts				43,157		10,354				53,511
Hewed ties			2,205	3,308						5,513
Poles						1,682,337				1,682,337
Piling						3,917				3,917
Total		28,724	3,753	215,885		1,696,608				1,944,970

1/ 1925-1936 inclusive
2/ From a special survey in 1935.
3/ 1927-1934 inclusive.
4/ 1925-1934 inclusive.
5/ 1927-1929-1931-1933.

Glossary

NONFOREST LAND TYPES

Townsites - includes both incorporated and unincorporated urban settlements.

Cultivated - areas cleared and/or cultivated for agricultural use, including pasture.

Stump pasture - logged off or burned off lands, part of operating farm units, now chiefly devoted to grazing and from which stumps or snags have not been removed.

Barrens - areas too rocky, too scanty as to soil, or too exposed, to support a vegetative cover of either trees, shrubs, or herbs.

Grass - areas such as parks, mountain meadows, or treeless ridges, whose principal vegetation is grass and herbs.

Brush - areas whose principal vegetation is sagebrush, brush, or shrubs as a permanent type.

FOREST LAND TYPES

Timberland - forest areas capable of producing trees of commercial species and quality.

Producing timberland - timberland areas containing forest growth, or if not, which have been denuded since 1925.

Deforested timberland - nonrestocked old burns or cut-overs denuded prior to 1925.

Subalpine - stands above the altitude range of merchantability.

Rocky noncommercial - areas too steep, sterile, or rocky to produce merchantable timber.

Sawlog stands - timber stands containing 3 thousand board feet per acre for the ponderosa pine and lodgepole pine types or 4 thousand board feet for the other types, except cottonwood, in trees of sawlog size. The cottonwood type has no minimum limit. The minimum size classes for sawlog trees are: white pine, ponderosa pine, lodgepole pine - 12 inches, cedar - 24 inches, and other species - 14 inches (diameter breast high).

Merchantable pole stands - cedar or cedar-white fir stands containing 8 or more commercial cedar poles to the acre (12 to 24 inches diameter breast high).

Other pole stands - timber stands in which the majority of the dominant trees are between 6 inches and merchantable size.

Seedling or sapling stands - timber stands in which the majority of the dominant trees are less than 6 inches.

Recent burns and cut-overs - areas cut or burned since 1925 for which sufficient time has not elapsed to allow classification into one of the other timber types.

Reserved areas - includes publicly owned forest lands not available for conversion into timber products but reserved for parks, primitive areas, protection of municipal watersheds, etc.

Zones - Zone One includes areas loggable under present conditions.

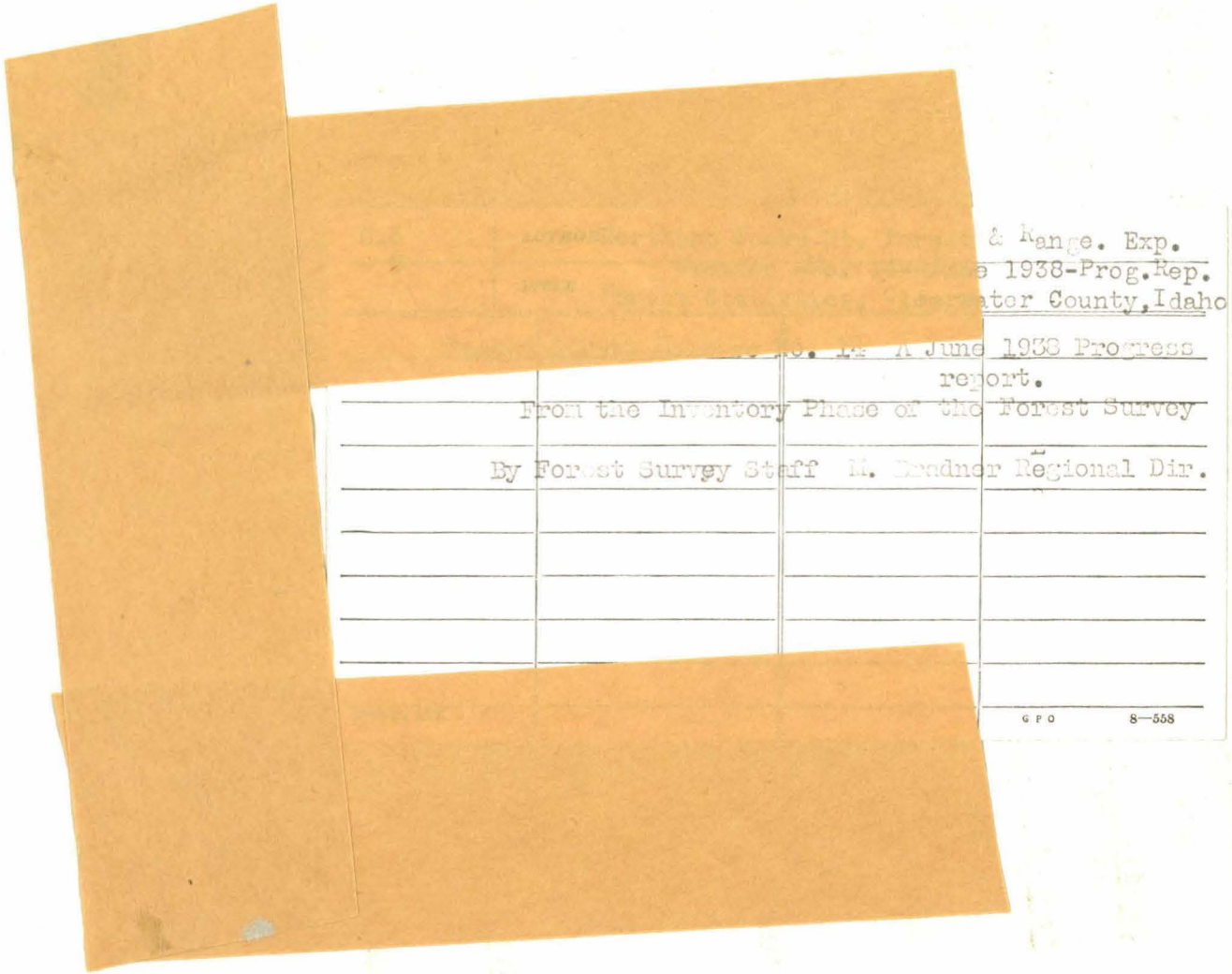
Zone Two includes areas loggable with increased stumpage values.

Zone Three includes areas of no probable value for timber production.

Site class - the index of the productivity of an area for growing forests. There are 5 or 6 site classes with the best sites numbered one, the next best two, etc.

Stocking - in young timber stands stocking is the measure of the extent to which an area is covered with forest growth. The degrees of stocking are:

Less than 10 percent stocked	= unstocked
10 to 39 percent stocked	= poorly stocked
40 to 69 percent stocked	= medium stocked
70 to 100 percent stocked	= well stocked



& Range. Exp.
1938-Prog.Rep.
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June 1938 Progress report.

From the Inventory Phase of the Forest Survey

By Forest Survey Staff M. Gardner Regional Dir.

GPO 8—558